

Fig. 1

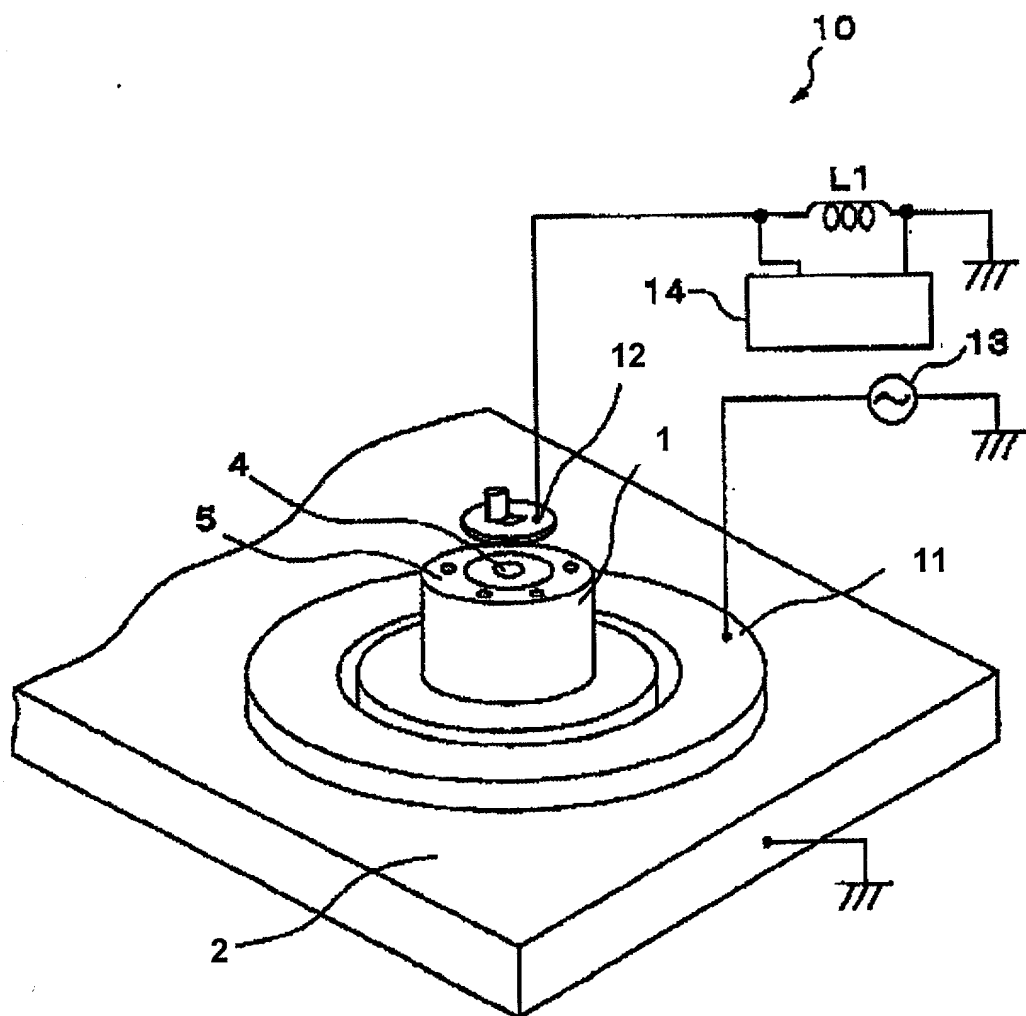


Fig. 2

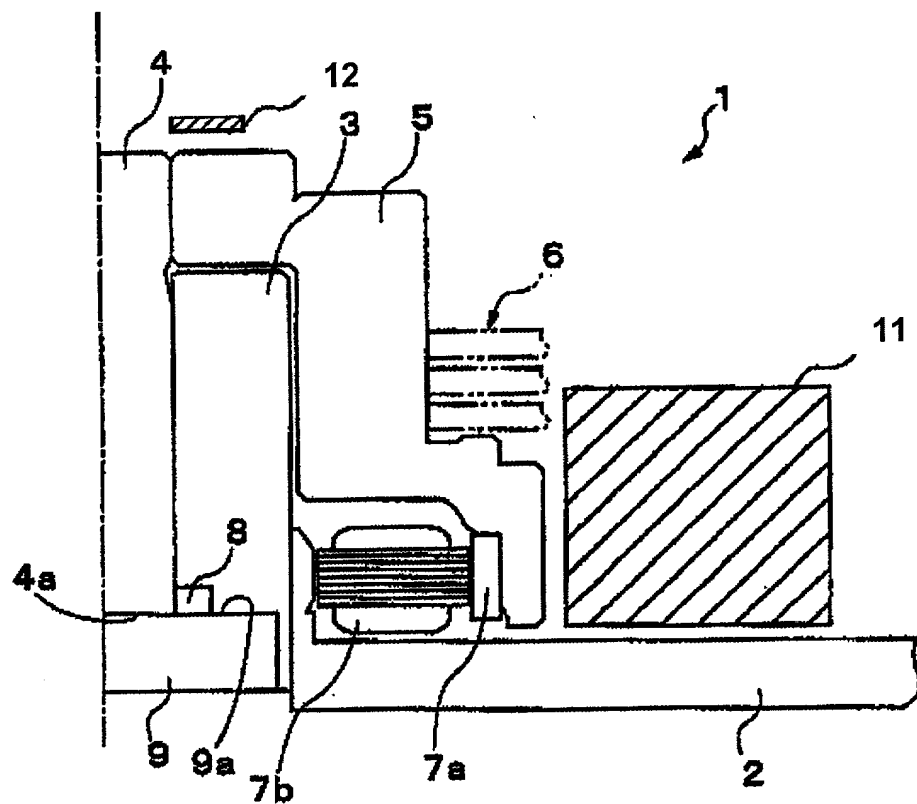


Fig. 3 (a)

(In contact state)

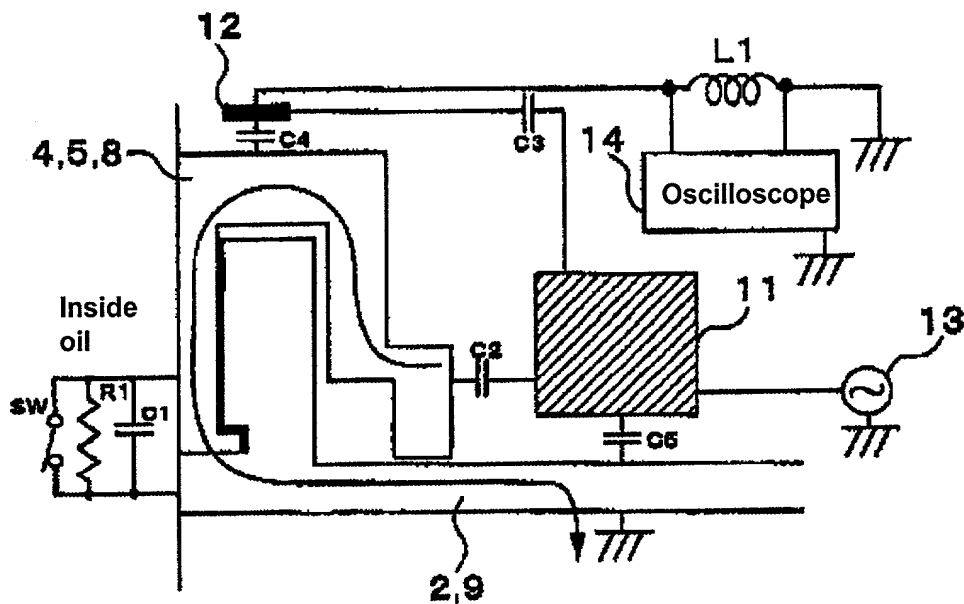


Fig. 3 (b)

(In floating rotation)

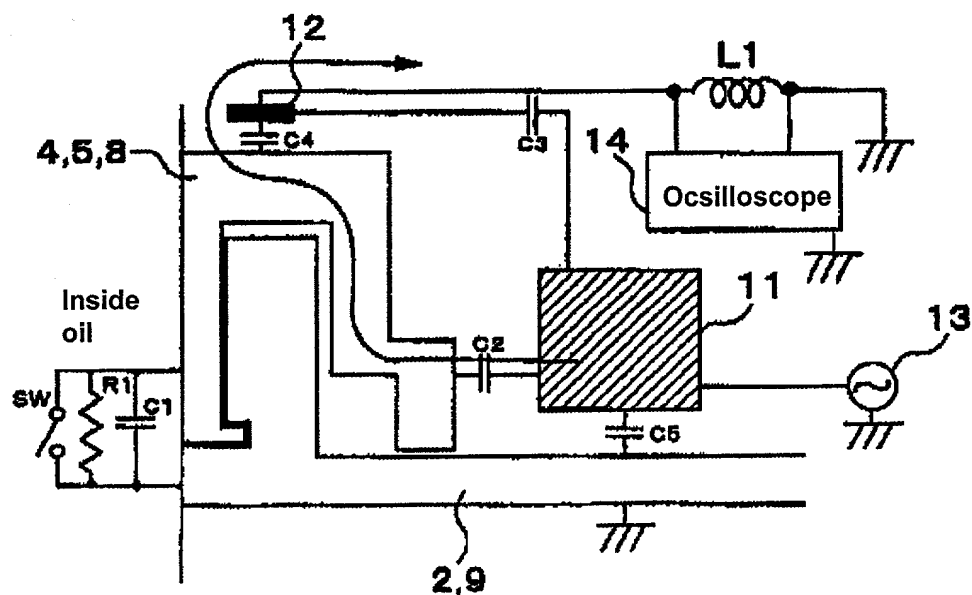


Fig. 4

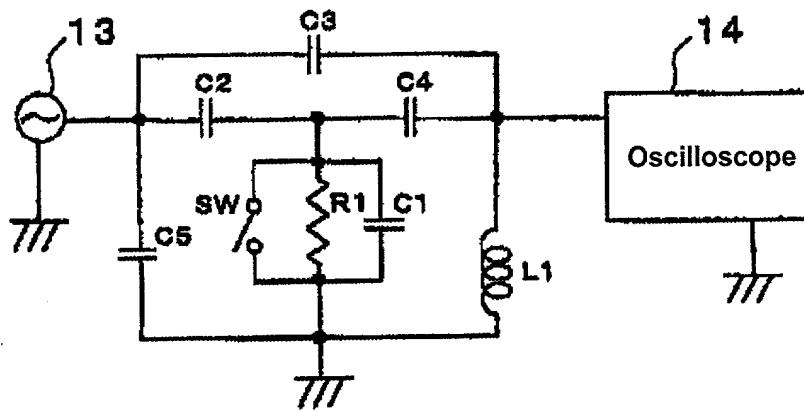


Fig. 5

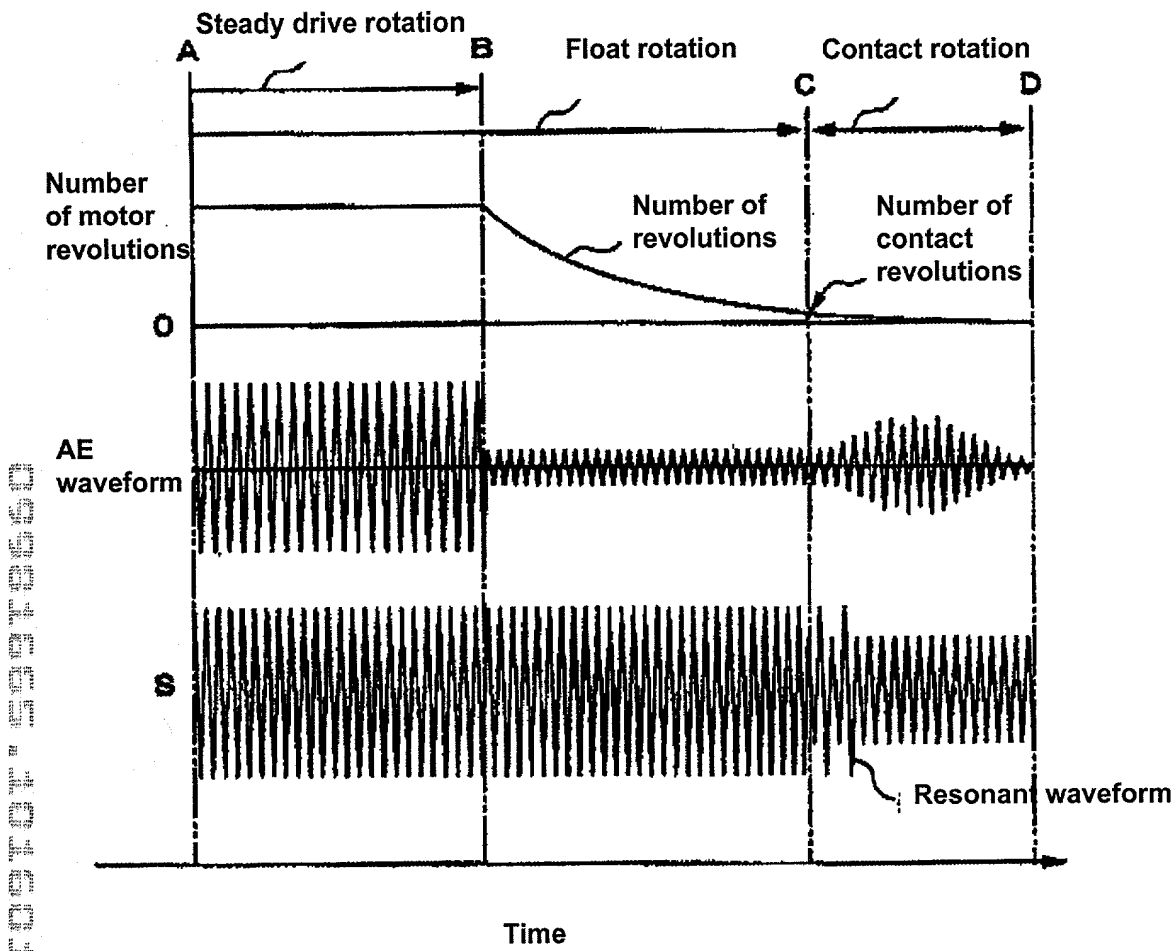


Fig. 6

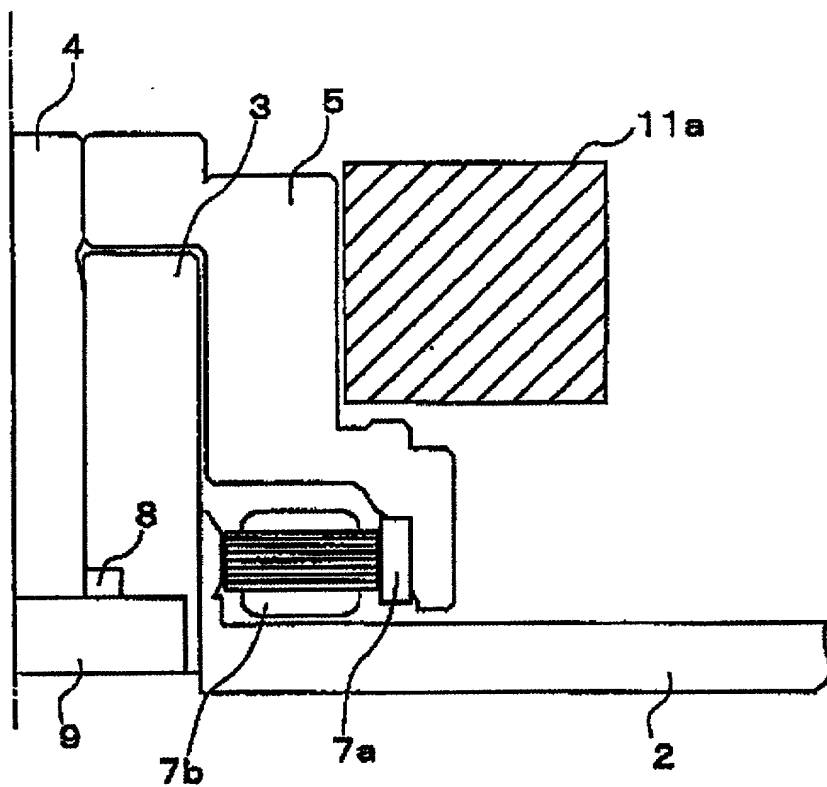


Fig. 7 (a)

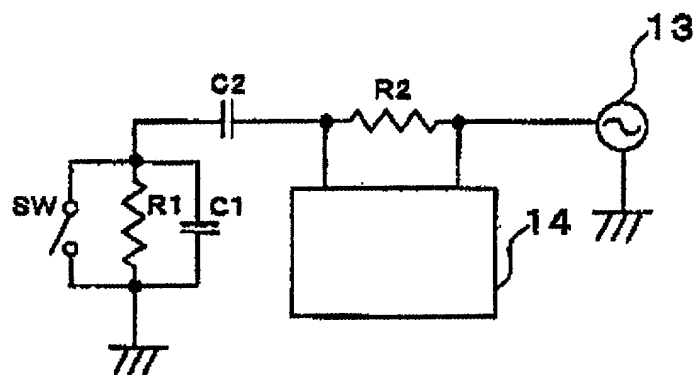


Fig. 7 (b)

(In contact state)

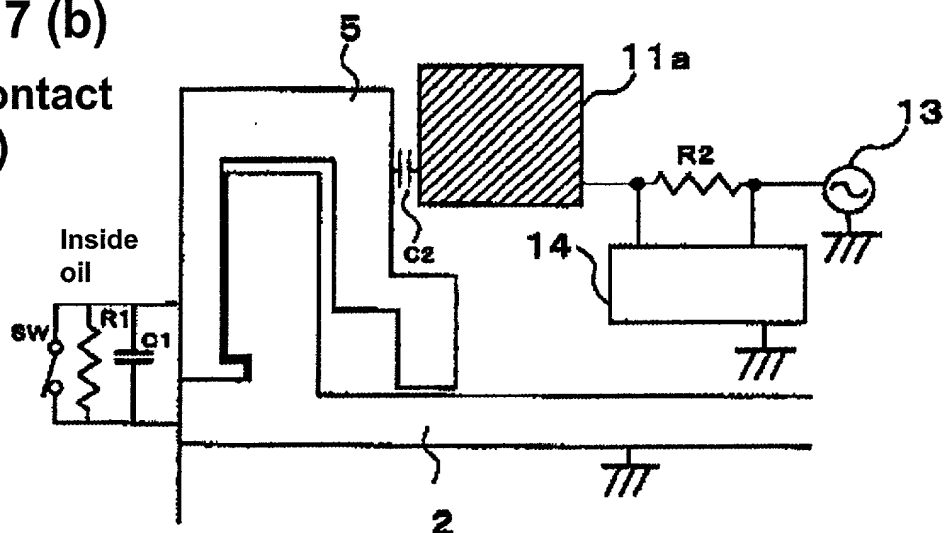


Fig. 7 (c)

(In floating rotation)

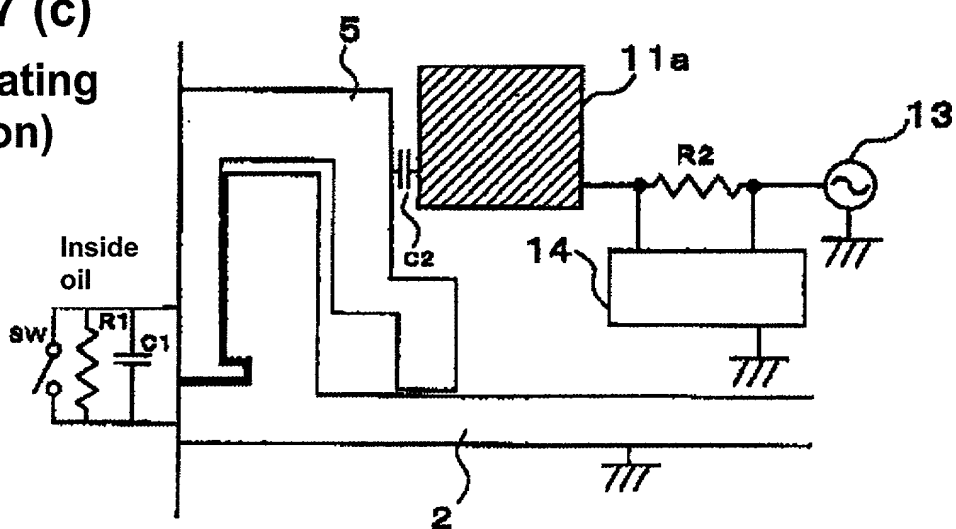


Fig. 8

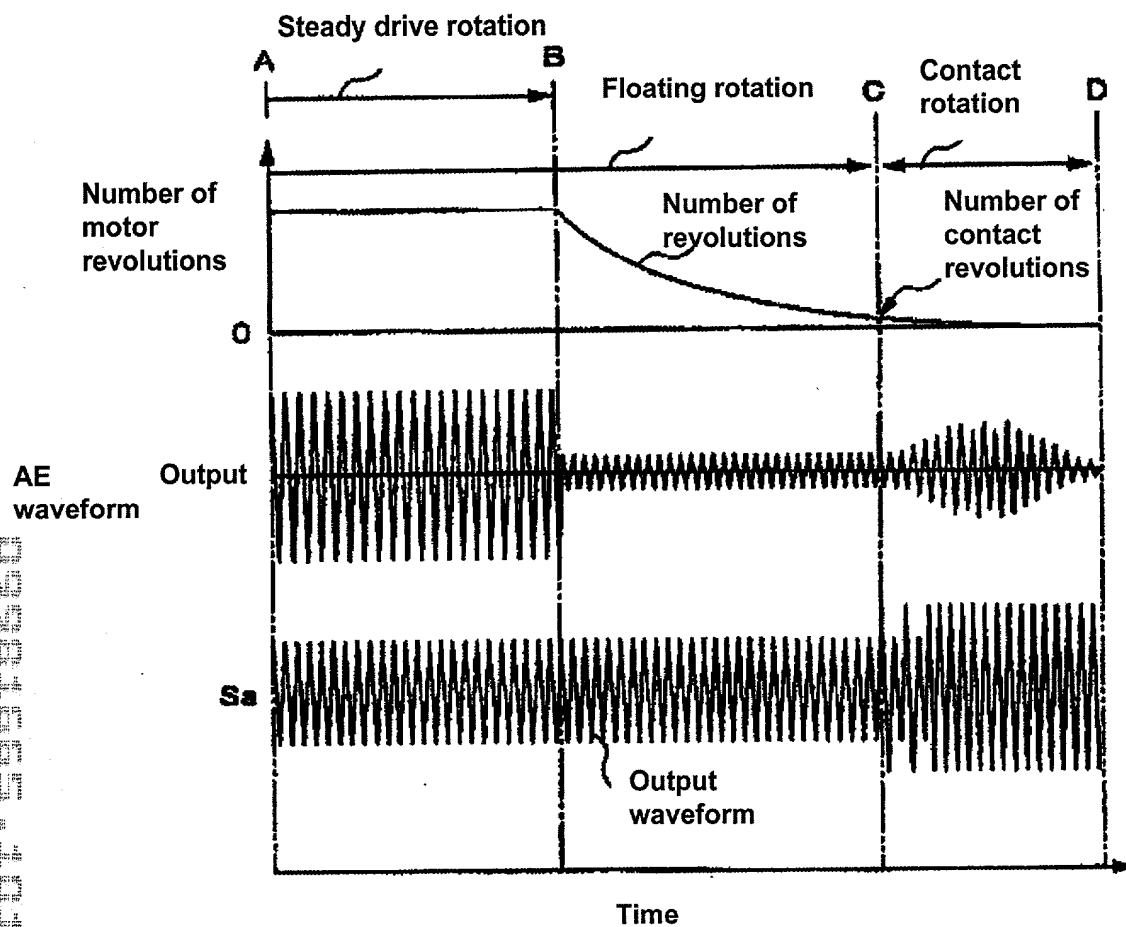


Fig. 9

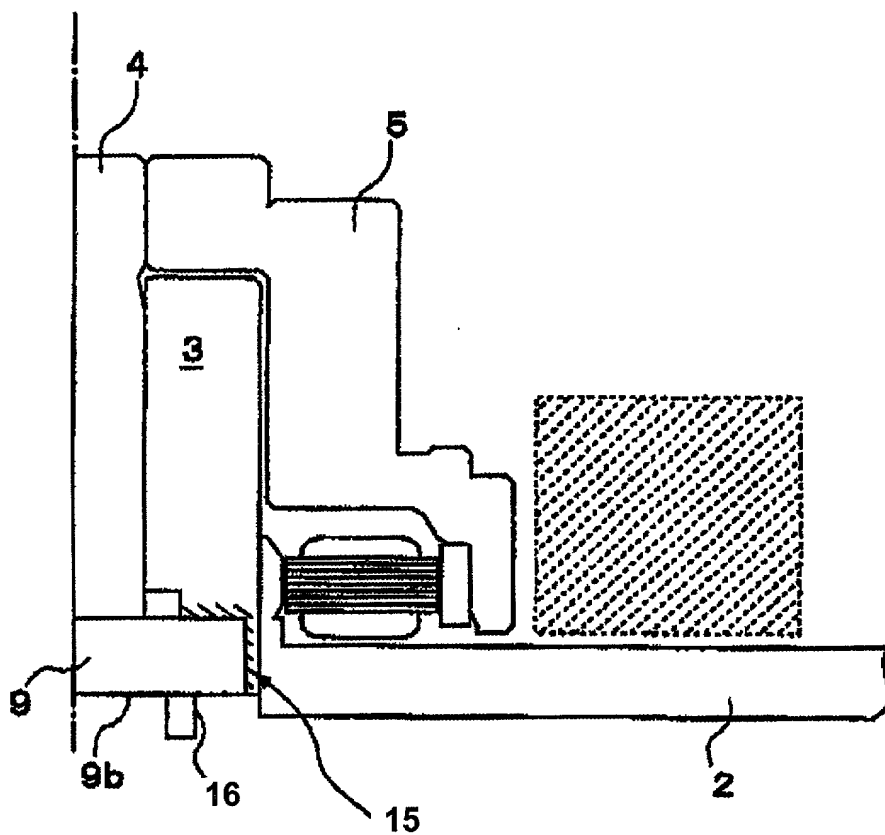


Fig. 10

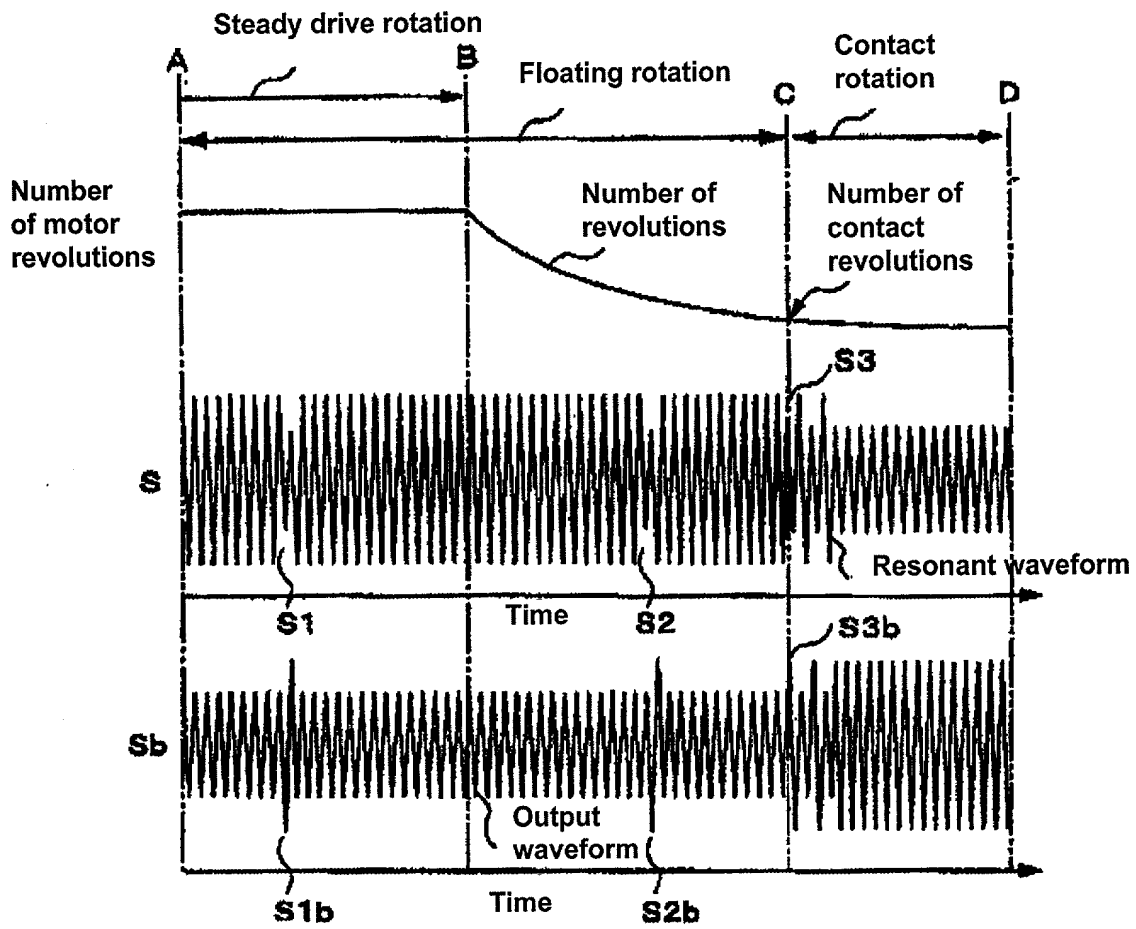


Fig. 11

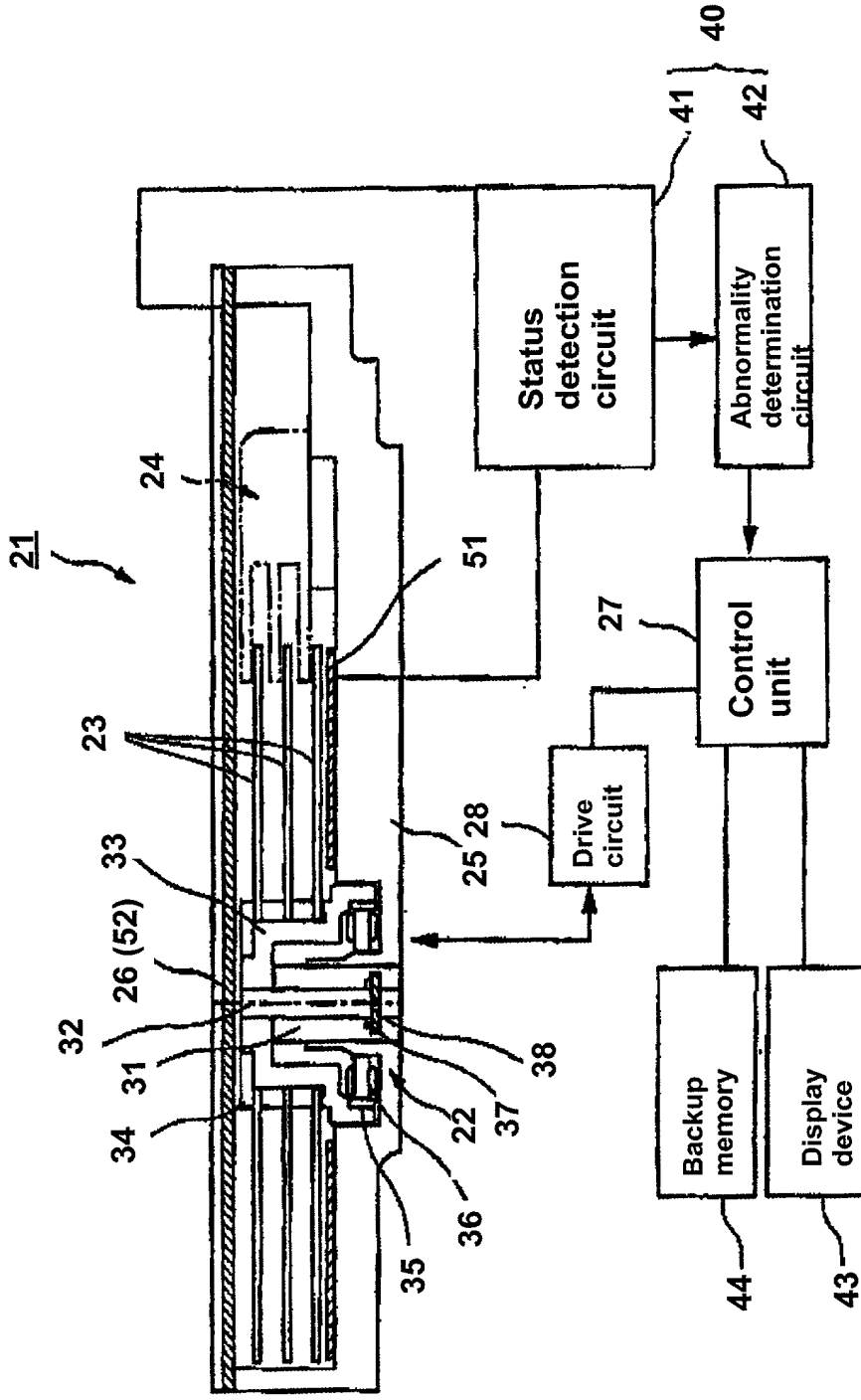


Fig. 12

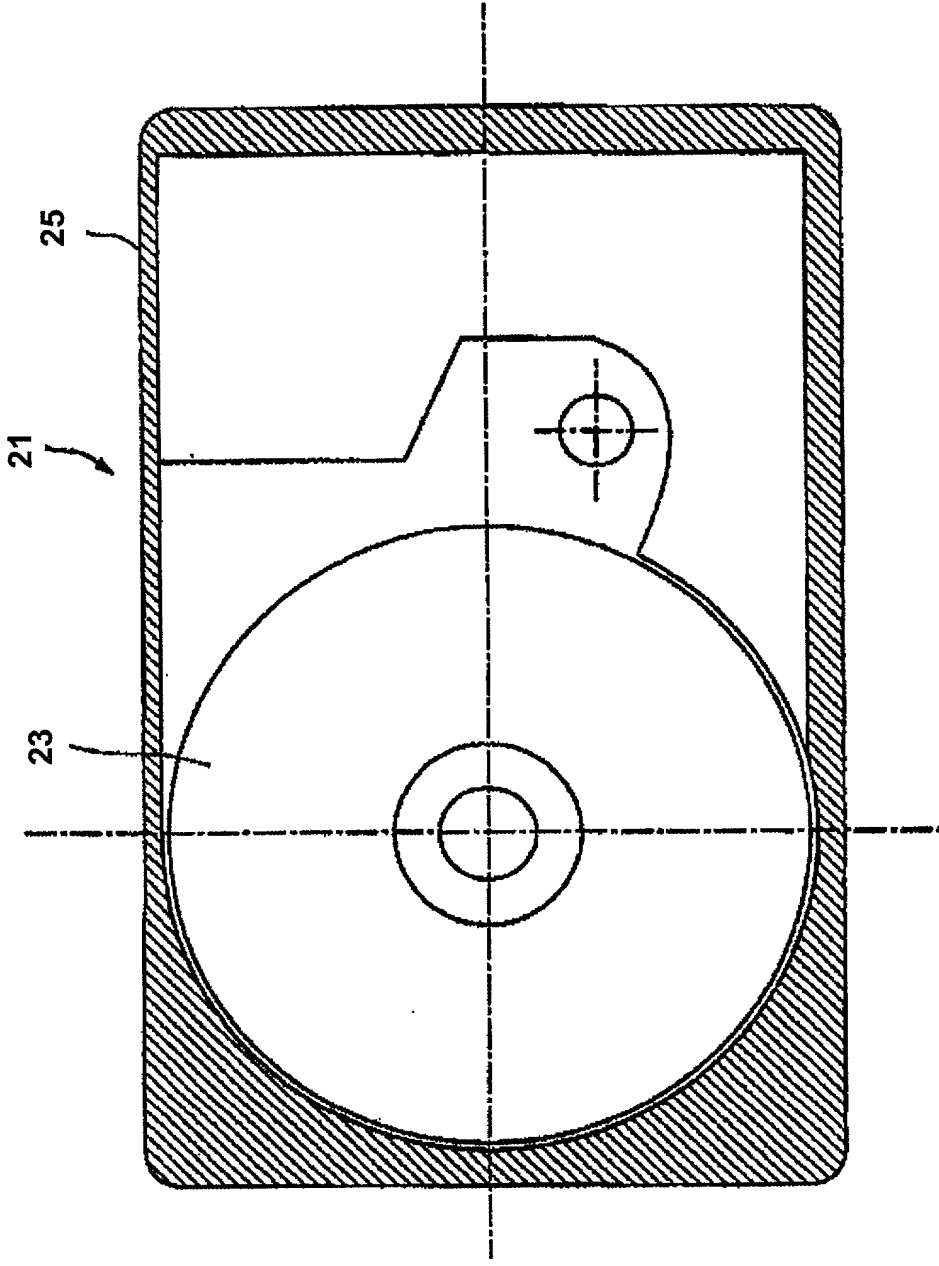


Fig. 13 (a)

(In contact state)

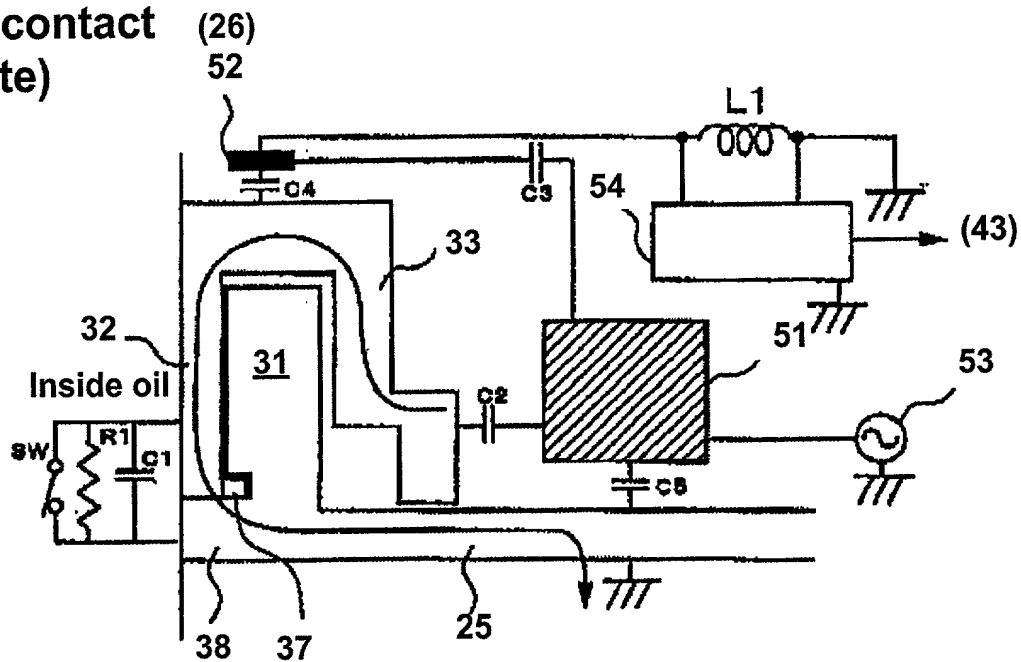


Fig. 13 (b)

(In floating rotation)

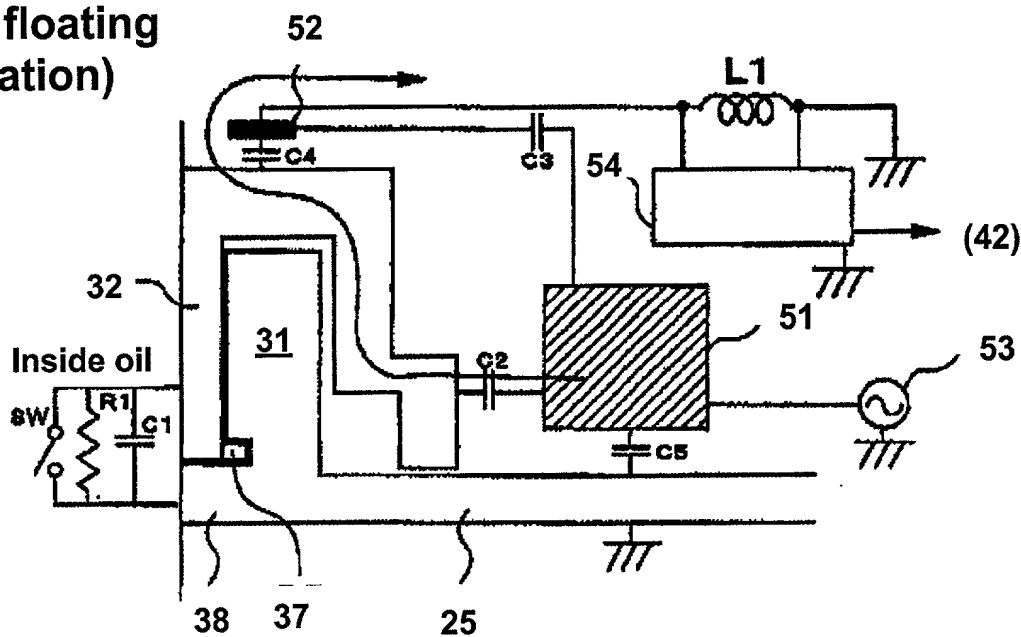


Fig. 14

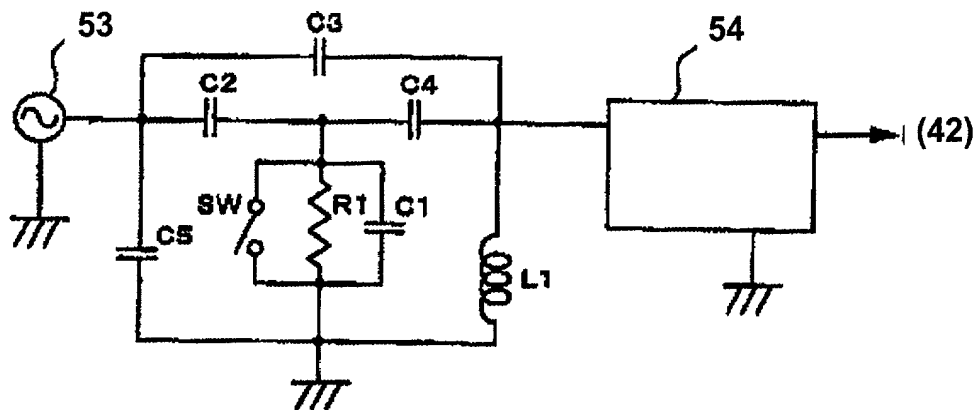


Fig. 15

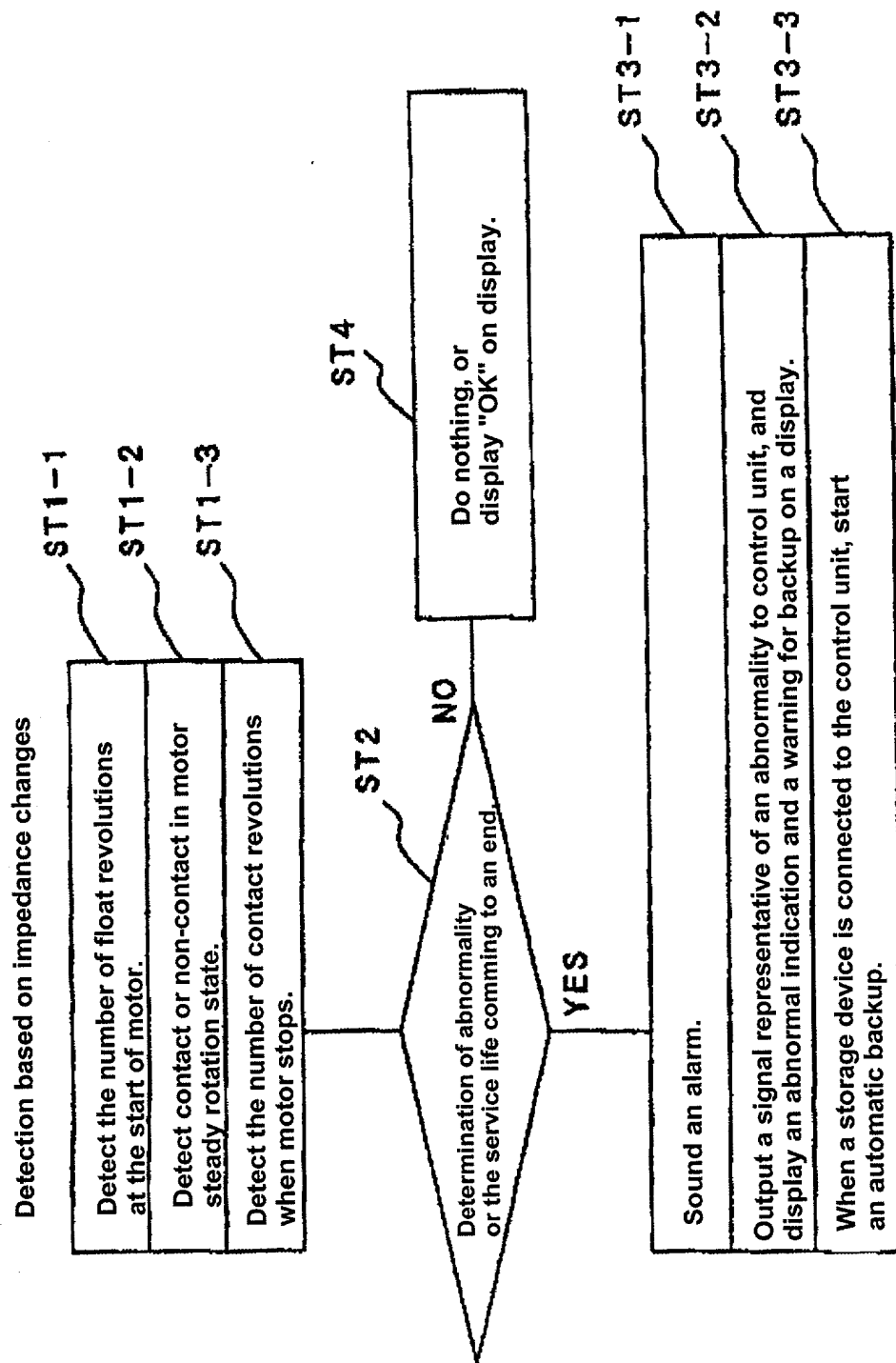


Fig. 16

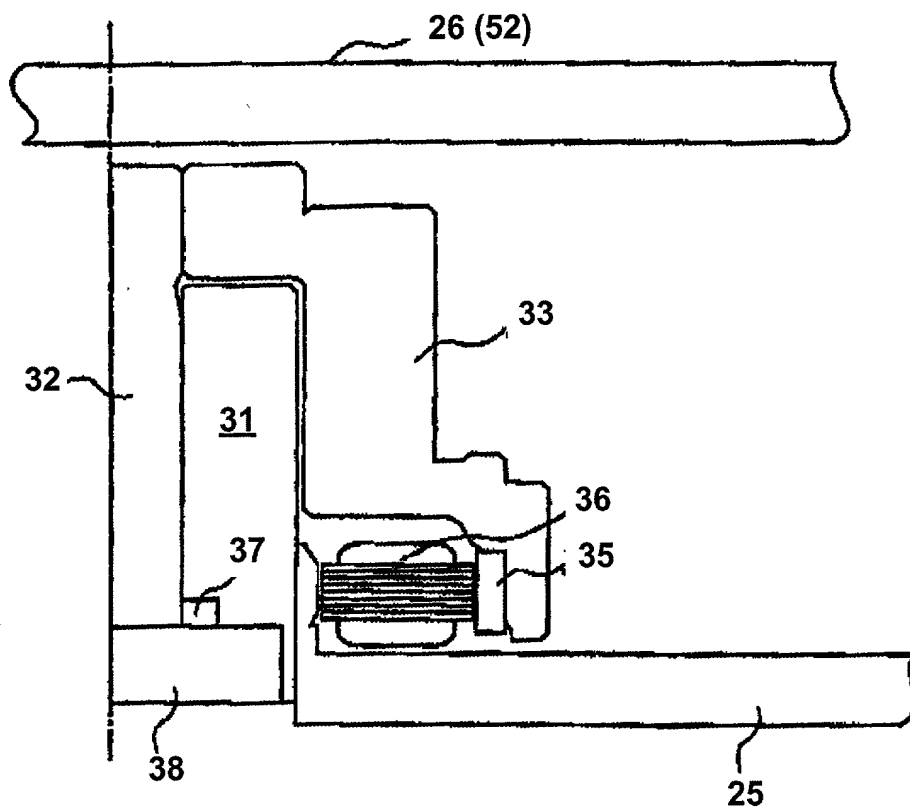


Fig. 17 (a)

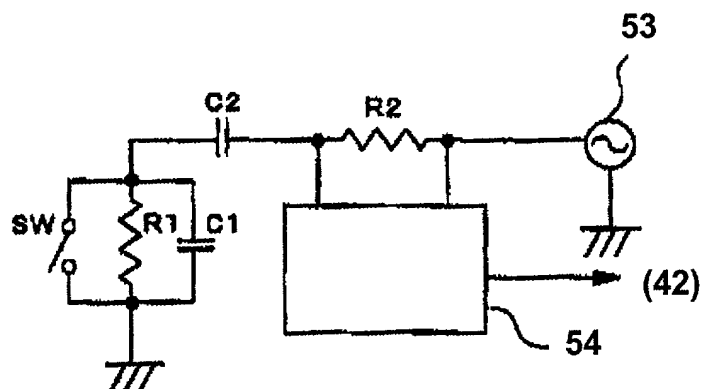


Fig. 17 (b)

(In contact state)

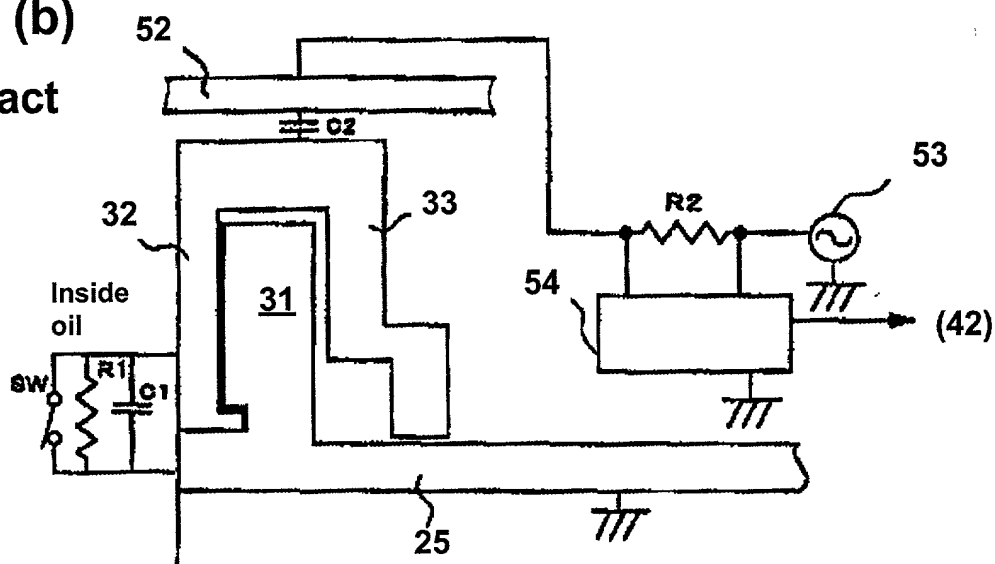


Fig. 17 (c)

(In floating rotation)

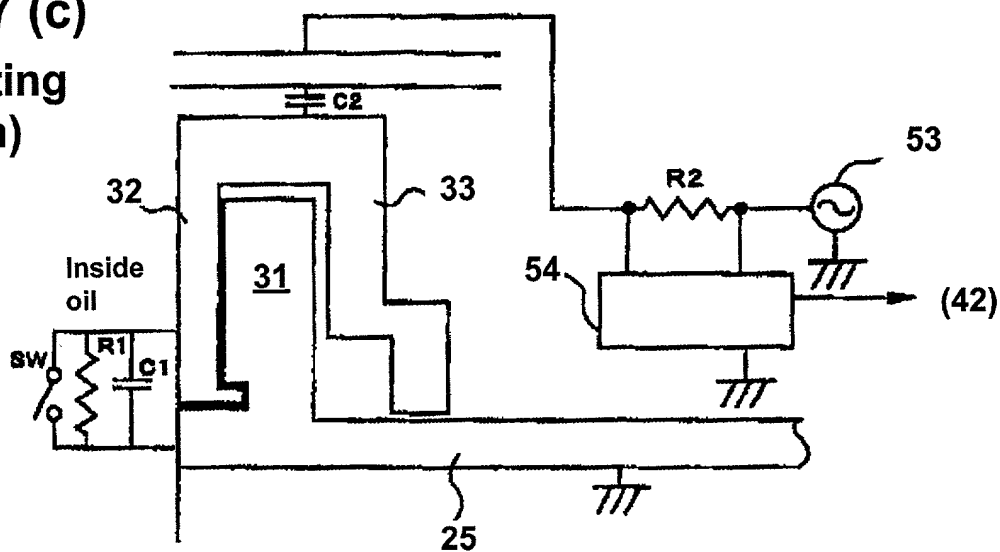


Fig. 18 (a)

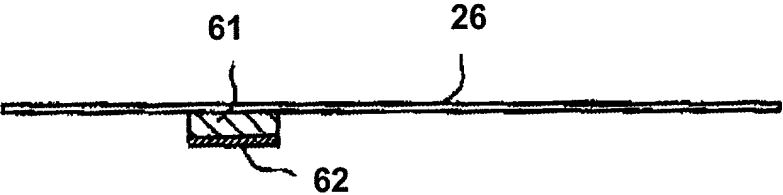


Fig. 18 (b)

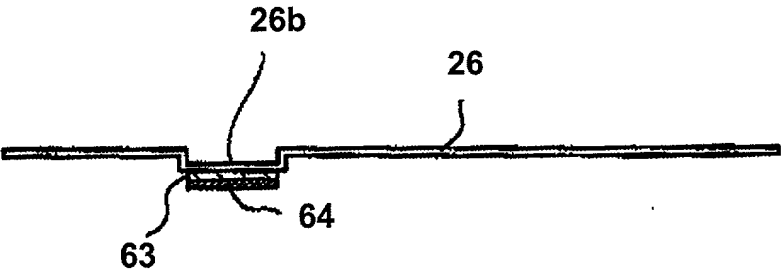


Fig. 19

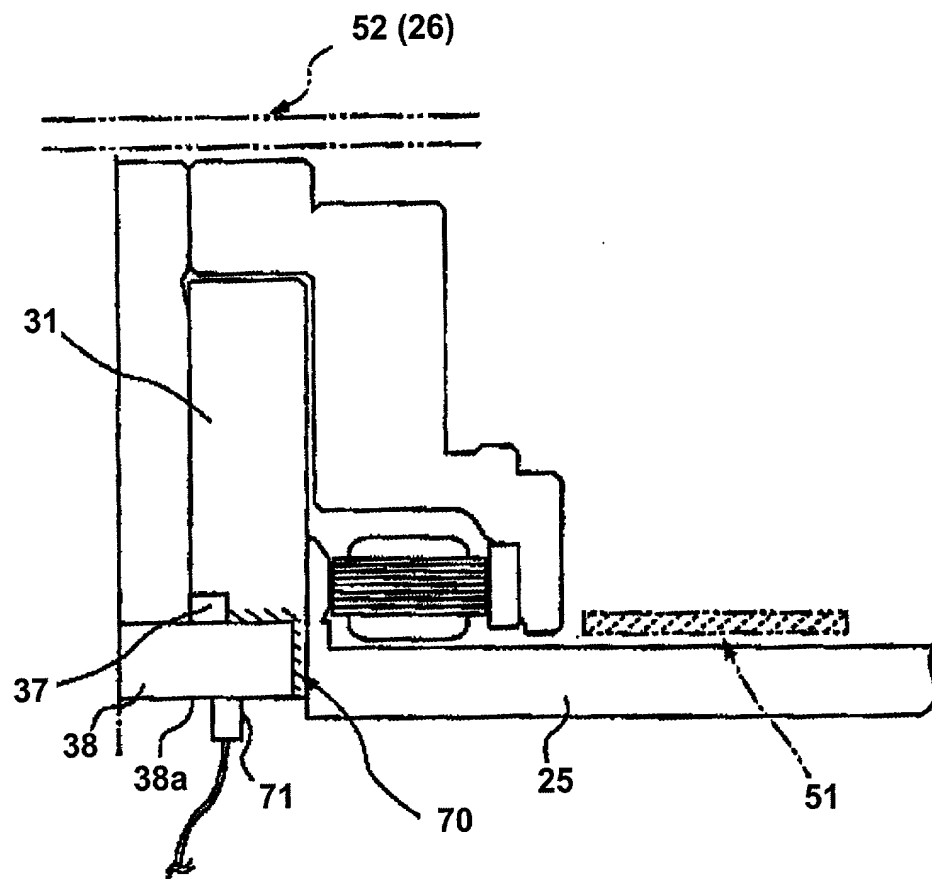


Fig. 20

Detection of contact noise by AE sensor
AE sensor (acoustic emission) is mounted on motor or on periphery of motor

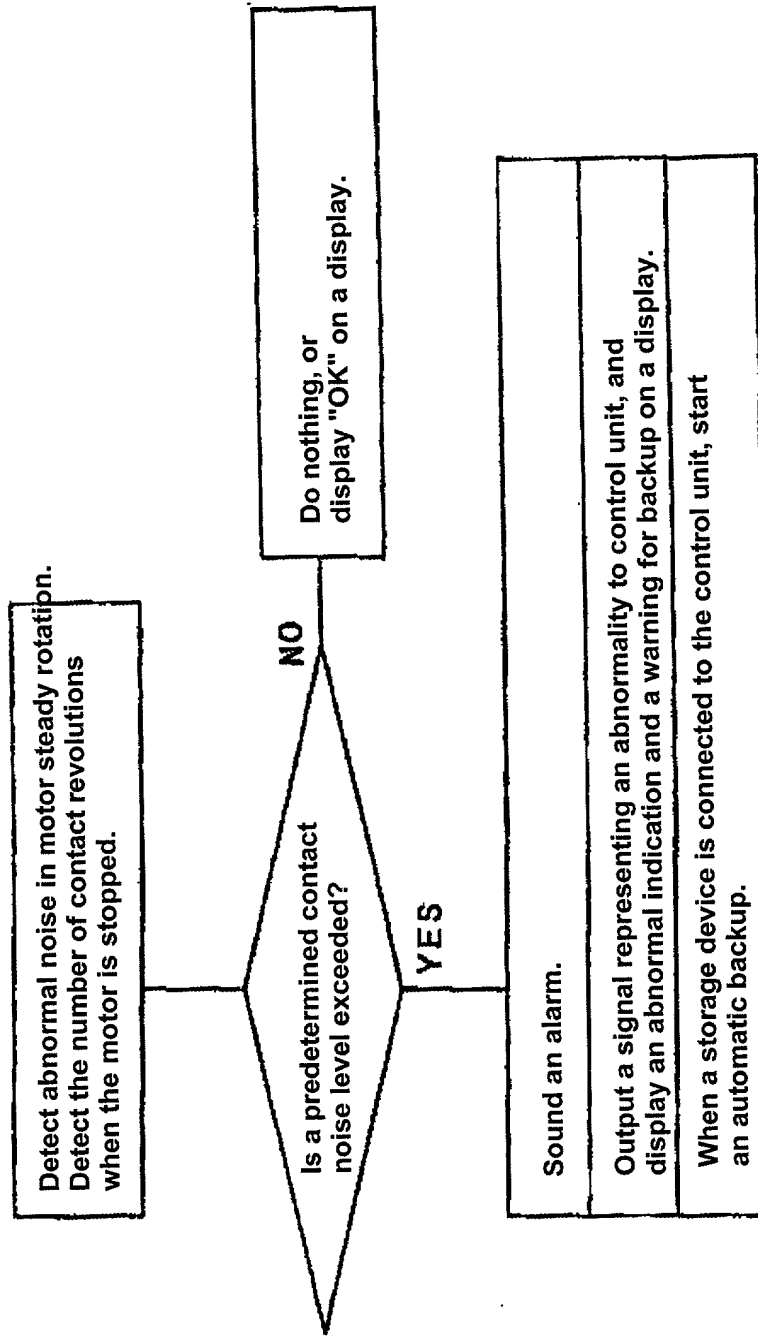


Fig. 21

Detection based on temperature increase of motor

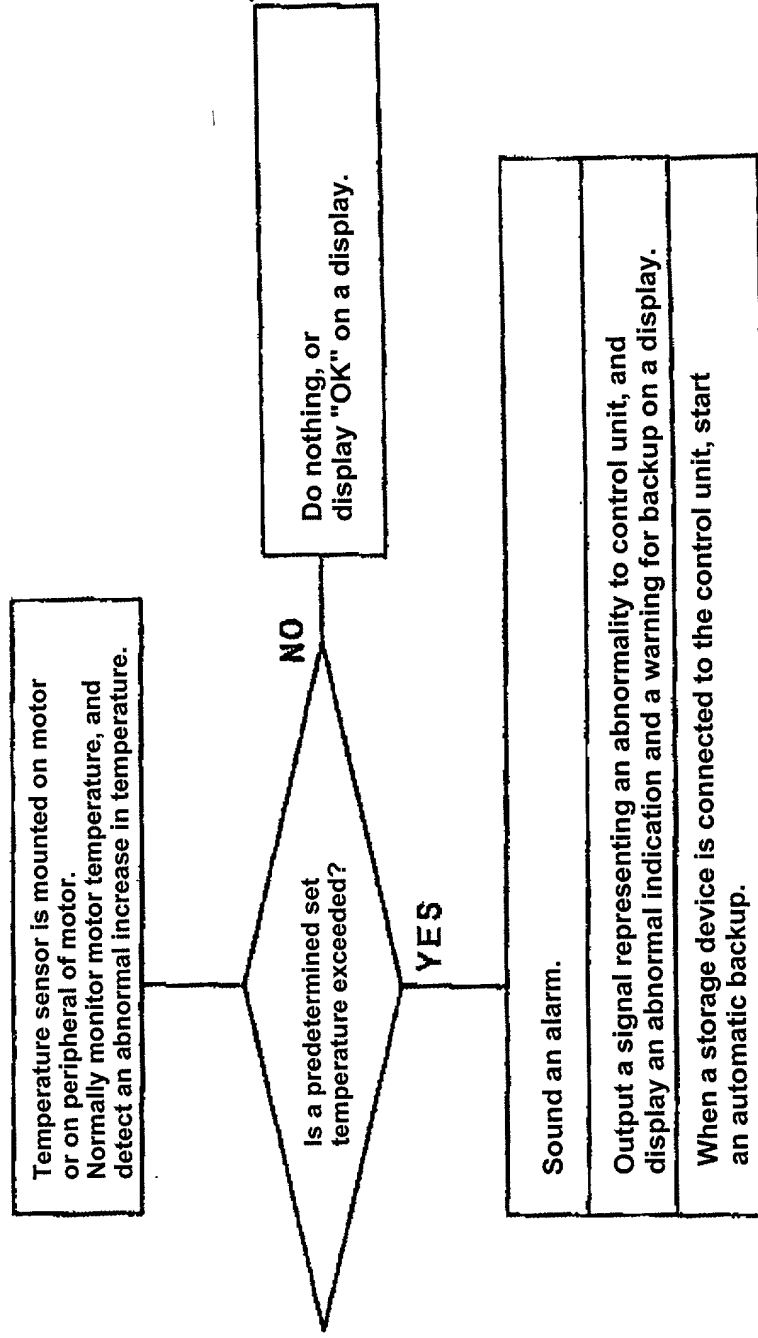


Fig. 22

Increase in the number of retry attempts of writing and reading by magnetic head

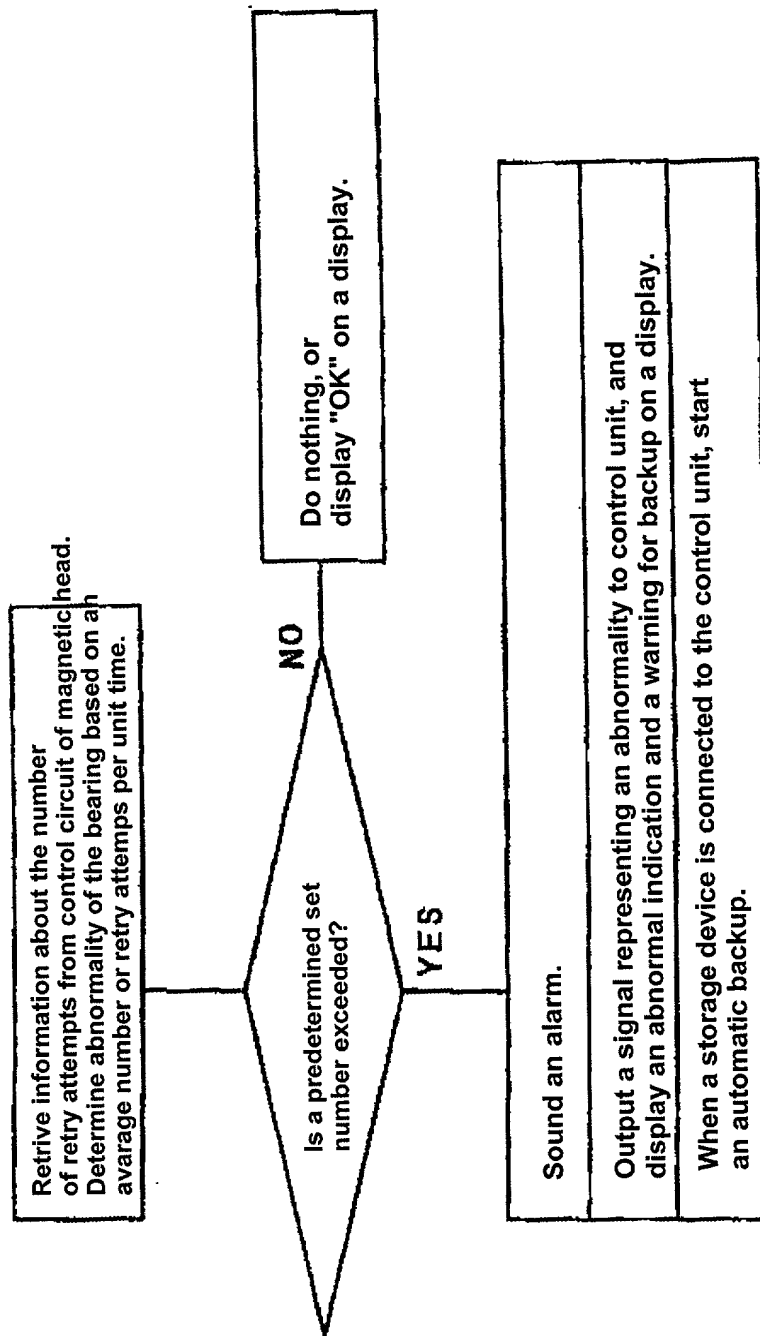


Fig. 23

